

GEOLOGIC HAZARD REPORT REQUIREMENTS

IR A-4

Reference: California Building Standards Administrative Code, Section 4-317(e)
2001 California Building Code (CBC) Sections 1629A.4 and 1804A.1
2007 CBC, Sections 1613A and 1802A
Education Code Section 17212.5.

Revised 11-01-07
Revised 07-21-05
Revised 02-03-04
Issued 09-01-99

Discipline: Structural

This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA, which include State of California public elementary and secondary schools (grades K-12), community colleges, and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IR's. Only IR's listed in the document at <http://www.dsa.dgs.ca.gov/Pubs/default.htm> (click on "DSA Interpretations of Regulations Manual") at the time of plan submittal to DSA are considered applicable.

Purpose: The purpose of this Interpretation of Regulations (IR) is to describe the requirements for the submission of a geologic hazard report to the Division of the State Architect (DSA) for projects within the jurisdiction of DSA.

1. GENERAL: A geologic hazard is any geologic condition that is a potential danger to life or property. Geologic hazards include, but are not limited to, *earthquake shaking, surface rupture, liquefaction, and landslides.*

The California Building Standards Administrative Code (CAC), Section 4-317(e) includes requirements for the performance of soils investigation studies and geologic hazard studies for all construction, including additions and alterations. Note that "Geotechnical Reports" (or soils investigation reports) often include soils studies only and may not include complete geologic hazard studies

2. PROJECTS REQUIRING GEOLOGIC HAZARD REPORTS: Except as noted in Section 3, a geologic hazard report shall be submitted to DSA with the project application for projects located in any of the areas described in paragraph 2.1, 2.2, 2.3, or 2.4.

2.1 On any new site.

2.2 Within any "state mandated geologic hazard zone" which includes:

- Earthquake Fault Zones (Public Resources Code (PRC) Div. 2, Ch. 7.5, Sec. 2621 et seq.)
- Seismic Hazard Zones for Landslides and Liquefaction (PRC Div 2, Ch. 7.8, Sec. 2690 et. seq.)

2.3 Within an area identified as a geologic hazard in the Safety Element of the Local General Plan.

2.4 On other existing sites when required by DSA, where a potential geologic hazard has been previously identified.

3. PROJECTS NOT REQUIRING GEOLOGIC HAZARD REPORTS: Except as noted in paragraph 2.4, a geologic hazard report will not be necessary for projects on existing sites in any of the situations described in paragraph 3.1, 3.2, or 3.3:

3.1 When the design professional in general responsible charge of the project signs a "Geo-Hazards Statement" on the Application for Approval of Plans and Specifications (Form DSA-1) certifying that the following three conditions are satisfied:

- The project is not located within a state mandated geologic hazard zone, and
- The project is not located within an area identified as a geologic hazard in the safety element of the local general plan, and
- The project is not located within an area where a potential geologic hazard has been previously identified.

3.2 Regardless of location, if the project includes only:

- non-structural alterations which do not cost more than 50% of the replacement cost of the structure, and/or
- incidental structural alterations (alterations which would not reduce the story lateral shear capacity by more than 5% or increase story shear by more than 5% in any existing story), and/or
- one-story wood or light metal frame relocatable buildings on an existing school site that have a floor area of less than 2,160 square feet.

3.3 The project is located on a site for which adequate studies (refer to CGS Note 48 for guidance) have already been made. Documentation of prior studies must be included with the project submittal to DSA.

4. SCOPE OF GEOLOGIC HAZARD STUDIES: For guidance in conducting a study and reporting evaluations and recommendations, refer to:

- Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California (1997)
- Special Publication 42 Fault-Rupture Hazard Zones in California (1997 revised edition, including supplements 1 and 2 added in 1999)

both published by the Department of Conservation and available to order from

<http://www.consrv.ca.gov/CGS/information/publications/index.htm>

5. REPORTING PROCEDURES: Two copies of the geologic hazard report must be submitted to DSA along with the initial project application. If a project is submitted without a geologic hazard report DSA may or may not elect to start the plan review process pending receipt of the report.

5.1 DSA will forward geologic hazard reports to the California Geological Survey (CGS) for review for projects within state mandated geologic hazard zones and for other projects as deemed required by DSA.

5.2 CGS will indicate either that a report is acceptable, or describe the reasons why a report is not acceptable, in a letter addressed to DSA and copied to the architect in

charge of the project. Projects for which a geologic hazard report is required will not be approved by DSA until CGS accepts the geologic hazard report.

6. REPORT REQUIREMENTS: Geologic hazard reports must satisfy the following requirements:

- 6.1** The report must adequately describe the site to which it applies. The site described must include the locations of all structures to be constructed as part of the project.
- 6.2** The report must specifically address all of the potential hazards listed in paragraph 1.
- 6.3** The report must be based on adequate investigation and study of the project site.
- 6.4** Proper seismic shaking (e.g. upper bound and design basis earthquake ground motion) values must be used in project characterization.
- 6.5** Adequate documentation must be provided to support conclusions.
- 6.6** The report must be signed by a California registered geotechnical engineer and a California certified engineering geologist.
- 6.7** When geologic hazards are identified, the report must provide recommendations for the mitigation of those hazards. If any changes to written recommendations are proposed after evaluation by CGS, then such changes must be submitted immediately to DSA in writing and forwarded to CGS for review.
- 6.8** CGS Note 48 will be used as a guide for review.

http://www.consrv.ca.gov/CGS/information/publications/cgs_notes/note_48/note_48.pdf